Week 1 Assignment 1

Problem Statement: Develop a preemptive scheduler.

As per our minutes, you have not submitted this assignment.

Cyclic Schedules are preemptive schedulers.

a. True  
b. False

The phase of a periodic task indicates the time separation between the start times of two consecutive instances of the task.

a. True 
b. False

Unlike table-driven schedulers, cyclic schedulers do not need to store a precomputed schedule.

a. True 
b. False

A cyclic scheduler is less proficient than a pure table-driven scheduler for scheduling a set of periodic hard real-time tasks.

a. True 
b. False

A good algorithm for scheduling a set of periodic hard real-time tasks tries to complete each task in the shortest possible time.

a. True 
b. False

Assume that a cyclic scheduler is used to schedule two periodic hard real-time tasks. The tasks are specified by giving their computation time, period, relative deadline. If the two tasks are specified as (5 micros, 20 micros, 10 micros) and (7 micros, 25 micros, 23 micros), then the maximum cycle time is 30 micros.

a. True 
b. False

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a. True 
b. False

Soft real-time tasks do have associated time bounds.

a. True 
b. False

The objective of any good hard real-time task scheduling algorithm is to minimize the average response times of the tasks.

a. True 
b. False

Suppose three hard real-time periodic tasks T1, T2, and T3 with periods p1 micros, p2 micros, and p3 micros are being run on a multiprocessor using a table-driven scheduler. The scheduling table of the scheduler must have schedules for these three tasks over the time interval [0, infinity).

a. True 
b. False